data safe® HX

RANGE SUMMARY

EnerSys®
Power/Full Solutions

Publication No: US-HX-RS-010 - March 2008

Introduction to . . . The DataSafe® HX Battery Range

The DataSafe® HX battery range of valve regulated lead acid batteries has been designed to offer superior solutions for the Information Technology and Uninterruptible Power Supply markets.

DataSafe HX batteries are the ideal source of power to protect vital systems. DataSafe HX batteries incorporate select design features that maximize reliability while ensuring superior performance and an excellent service life.

Gas recombination technology for valve regulated lead acid batteries has totally changed the concept of standby power.

The minimal level of gas evolution allows battery installation in cabinets or on stands, in offices or near main equipment, maximizing space utilization and reducing storage and maintenance costs.

DataSafe HX batteries deliver superior performance, occupying less space than conventional standby power batteries.

Construction

1 **High conductivity terminals**
Brass insert with threaded receptacle (HX80-HX800), bolt terminal (HX80 - HX150), or faston tab (HX25-HX50) for maximum conductivity and ease of installation.

2 **High integrity terminal seal**
Compression grommet (HX205-HX800) or dual welded/epoxy seal (HX25-HX150) designed for long life.

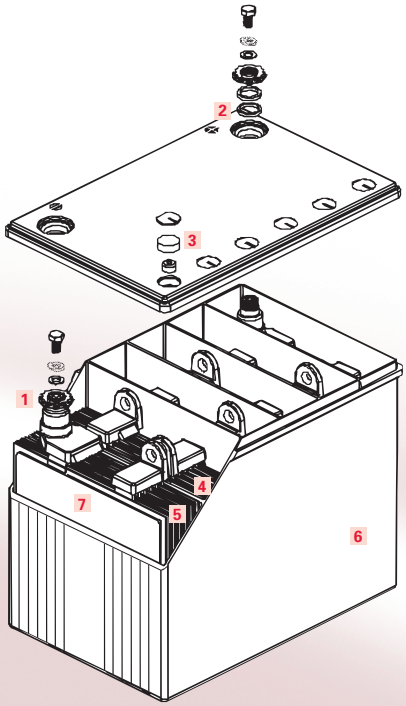
3 **Self-regulating relief valve**
Low pressure non-return valve prevents ingress of atmospheric oxygen.

4 **Rugged high performance positive plates**
Grids designed to resist corrosion and prolong active life.

5 **Balanced negative plates**
Ensure optimum recombination efficiency.

6 **Tough cell containers**
Thick-wall plastic, highly resistant to shock and vibration. Flame retardant material is the standard offering.

7 **Separators**
Low resistance microporous glass fiber. The electrolyte is absorbed within this material.



Features & Benefits

- Positive and negative plate grids made of lead-calcium-tin alloy for long life and efficient recharge.
- Flame retardant case and cover to meet UL1778.
- Individual cell vents.
- DataSafe HX battery containers and covers are hermetically sealed to provide leak resistance over the life of the product.
- AGM separators - The electrolyte is completely absorbed into the separator.
- High performance brass threaded receptacle, bolt terminal, and faston terminals.
- Increased energy density.
- Computer optimized electrochemistry for increased power up to the 15 minute rate.
- 100% initial battery capacity.

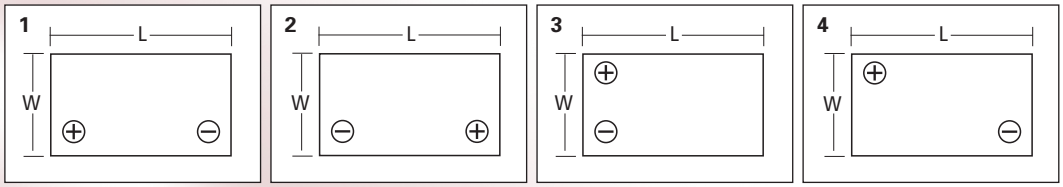
Publication No: US-HX-RS-010 - March 2008

GENERAL SPECIFICATIONS

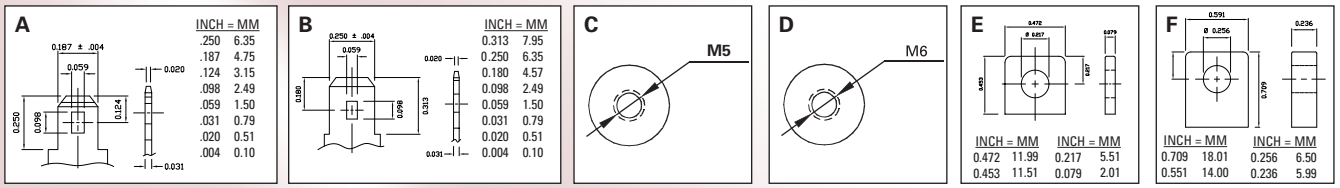
Type	Nominal Voltage (V)	Nominal Ah: 8 hr rate to 1.75 volts/cell at 77°F/25°C end voltage	Watts/Cell: @ 15 min. rate to 1.67 volts/cell at 77°F/25°C end voltage	Nominal Dimensions: Overall * Height mm	Overall * Height inch	Width mm	Width inch	Length mm	Length inch	Typical Weight kg	Typical Weight lbs	Short Circuit Current (A)	Max Discharge Current (Amps-2 min rate)	Internal Resistance (mΩ)	Layout	Terminals
HX25	12	4.5	23	107	4.2	70	2.8	90	3.5	2.0	4.4	300	41	16.54	1	A/B
HX35	12	7	36	100	3.9	65	2.6	151	6.0	2.8	6.1	500	62	13.17	3	A/B
HX50	6	11	53	100	3.9	50	2.0	151	6.0	2.2	4.7	720	93	6.07	1	A/B
HX50	12	11	53	100	3.9	98	3.9	151	6.0	4.1	9.1	720	93	12.00	3	A/B
HX80	12	16	80	167	6.6	76	3.0	181	7.1	6.4	14.0	1000	140	8.52	2	C/E
HX100	12	21	100	175	6.9	125	4.9	166	6.5	10.0	22.0	1500	171	7.14	2	C/E
HX135B	12	28	135	179	7.1	131	5.1	197	7.8	12.0	28.4	1800	238	5.63	1	F
HX135R	12	28	135	170	6.7	131	5.1	197	7.8	12.0	28.4	1800	238	5.63	1	C
HX150	12	32	150	172	6.8	165	6.5	197	7.8	12.0	28.4	2400	277	5.00	2	D/F
HX205	12	44	204	209	8.2	139	5.5	228	9.0	19.5	43.0	2775	466	4.50	1	D
HX300	12	70	284	210	8.3	175	6.9	261	10.3	27.2	60.0	3175	591	3.93	1	D
HX330	12	82	336	214	8.4	175	6.9	305	12.0	32.2	71.0	3700	695	3.37	1	D
HX400	12	94	381	215	8.5	173	6.8	341	13.4	36.3	80.0	4225	854	2.95	1	D
HX500	12	120	506	274	10.8	173	6.8	341	13.4	49.9	110.0	4600	986	2.70	1	D
HX540	12	120	540	274	10.8	173	6.8	341	13.4	50.4	111.0	4775	1040	2.60	1	D
HX800	6	200	780	215	8.5	173	6.8	341	13.4	36.3	80.0	6200	1272	0.98	4	D

** Including Terminal*

LAYOUT



TERMINAL



Faston Tab: 187 | **Faston Tab: 250** | **Threaded Receptacle** | **Threaded Receptacle** | **M5 Bolt** | **M6 Bolt**

- Normal operating temperature range -4°F/-20°C to 122°F/50°C
- Float charging voltage
  2.25 - 2.28 Volts per cell at 77°F/25°C
- Charging current
  DataSafe® HX batteries can be safely recharged at high current rates.
- Storage time
  DataSafe HX batteries can be stored for up to 6 months at 77°F/25°C before a freshening charge is required.
  At higher temperatures this time interval will be reduced.
- Torque specifications -
  M5 Bolt - 40 lbf in (4.5 Nm) ± 5%
  M6 Bolt - 58 lbf in (6.5 Nm) ± 5%
  M5 Receptacle - 31 lbf in (3.5 Nm) ± 5%
  M6 Receptacle - (HX80-HX150) 44 ibf.in (5Nm) ± 5%
  M6 Receptacle - (HX205-HX800) 65 lbf.in (6.8 Nm) ± 5%
- DataSafe HX batteries are designed to be installed on their base. Consult your local EnerSys® dealer before installing in any other orientation.

Standards

- UL listing - File No MH16464 (HX25-HX150) or MH12544 (HX205-HX800)
- Manufactured to EnerSys standards in ISO 9001 certified production facilities worldwide.
- Approved for shipping as non-hazardous, non-spillable - per IATA Special Provision A67 and 49 CFR

Constant Power Discharge (Watts per cell) to 1.75Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	41	27	21	17	13	9	7
HX35	65	43	33	27	20	14	11
HX50 (6V)	96	63	48	39	29	21	17
HX50	96	63	48	39	29	21	17
HX80	144	95	73	59	44	32	25
HX100	180	119	91	74	55	40	32
HX135	244	161	123	100	74	54	43
HX150	271	179	136	111	82	60	47
HX205	364	247	190	155	114	83	66
HX300	499	342	265	222	168	123	98
HX330	568	400	313	259	195	144	115
HX400	642	457	356	294	220	162	129
HX500	769	590	474	394	300	221	176
HX540	826	634	510	422	314	230	183
HX800 (6V)	1141	877	713	603	463	346	277

Constant Power Discharge (Watts per cell) to 1.70Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	44	29	22	18	13	9	7
HX35	69	45	34	28	20	15	12
HX50 (6V)	101	66	50	41	30	22	17
HX50	101	66	50	41	30	22	17
HX80	153	100	76	61	45	33	26
HX100	191	125	94	77	56	41	32
HX135	258	168	127	103	76	55	44
HX150	287	187	142	115	84	62	48
HX205	393	262	199	162	119	86	68
HX300	540	363	278	231	173	126	100
HX330	613	423	329	271	202	148	118
HX400	695	484	373	306	228	166	132
HX500	831	629	497	410	307	224	177
HX540	891	673	531	436	323	233	183
HX800 (6V)	1259	944	758	636	484	359	287

Constant Power Discharge (Watts per cell) to 1.67Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	45	29	23	18	13	10	8
HX35	71	46	36	28	20	15	12
HX50 (6V)	104	67	53	41	30	22	17
HX50	104	67	53	41	30	22	17
HX80	157	102	80	62	46	33	26
HX100	197	127	100	78	57	41	33
HX135	265	172	135	105	77	56	44
HX150	295	191	150	117	85	62	49
HX205	409	269	204	165	121	88	69
HX300	560	373	284	236	176	128	101
HX330	636	435	336	276	205	150	119
HX400	722	498	381	311	231	168	133
HX500	867	646	506	416	309	224	177
HX540	928	689	540	442	323	233	183
HX800 (6V)	1320	977	780	652	494	365	291

Constant Power Discharge (Watts per cell) to 1.65Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	46	30	23	18	13	10	8
HX35	72	46	36	28	21	15	12
HX50 (6V)	106	68	53	41	30	22	17
HX50	106	68	53	41	30	22	17
HX80	160	103	80	63	46	33	26
HX100	200	129	100	78	57	42	33
HX135	270	174	135	106	77	56	44
HX150	300	193	150	117	86	63	49
HX205	417	273	204	167	122	88	69
HX300	571	378	284	238	177	128	102
HX330	650	441	336	278	207	151	119
HX400	738	505	381	314	233	169	134
HX500	890	655	510	419	309	224	177
HX540	952	697	544	444	323	233	183
HX800 (6V)	1356	995	780	660	499	368	293

Constant Power Discharge (Watts per cell) to 1.63Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	47	30	23	18	13	10	8
HX35	73	47	36	28	21	15	12
HX50 (6V)	108	69	53	42	30	22	17
HX50	108	69	53	42	30	22	17
HX80	162	104	80	63	46	33	26
HX100	203	130	100	79	57	42	33
HX135	274	175	135	106	78	56	44
HX150	306	194	150	118	86	63	49
HX205	425	276	204	168	123	89	70
HX300	581	382	284	240	178	129	102
HX330	662	446	336	280	208	151	120
HX400	753	511	381	317	234	170	135
HX500	911	662	514	419	309	224	177
HX540	975	704	548	444	323	233	183
HX800 (6V)	1388	1011	780	667	503	370	294

Constant Power Discharge (Watts per cell) to 1.60Vpc at 77°F (25°C)

	Standby Time (Minutes)						
Type	5	10	15	20	30	45	60
HX25	47	30	23	18	13	10	8
HX35	74	47	36	28	21	15	12
HX50 (6V)	109	69	53	42	31	22	17
HX50	109	69	53	42	31	22	17
HX80	165	105	80	63	46	34	26
HX100	206	131	100	79	58	42	33
HX135	278	177	135	107	78	57	45
HX150	309	196	150	119	86	63	49
HX205	435	279	204	169	123	89	70
HX300	591	386	284	241	179	130	103
HX330	678	452	336	282	209	152	120
HX400	771	518	381	319	235	171	135
HX500	941	670	516	419	309	224	177
HX540	1007	713	549	444	323	233	183
HX800 (6V)	1428	1029	780	674	507	372	296

EnerSys
Power/Full Solutions

www.enersys.com

EnerSys
P.O. Box 14145
Reading, PA 19612-4145
USA
Tel: +1-610-208-1991
+1-800-538-3627
Fax: +1-610-372-8613

EnerSys Europe
Zurich, Switzerland
Tel: +41 (0)44 215 74 10

EnerSys Asia
Guangdong, China
Tel: +86-755-2689 3639

Distributed by:

Printed in USA

© 2008 EnerSys. All rights reserved.
Trademarks and logos are the property of EnerSys and its affiliates unless otherwise noted.

Publication No: US-HX-RS-010 - March 2008 - Subject to revisions without prior notice. E.&O.E.